

# Cardiff & Barry

## Mooring Operations Manual

WHEN PRINTED



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## Taking of Rope Men Services

Rope men services are compulsory for all vessels in the locks of Cardiff and Barry, the fees are included in the minimum locking fee (as per tariff)

The taking of licenced rope men services is compulsory for all vessels over 500GT from the lock to the berth inbound so as to comply with both Harbour Authority statutory obligations under the Port Marine Safety Code for safety of marine operations and ISPS obligations.

The rope man licencing procedure is designed so that the Harbour Authority can be reasonably ensure that persons engaged in mooring operations have met the requirements of the Port Marine Safety Code with regard to fitness, training and knowledge.

All vessels under 500GT and vessels engaged in maintenance work within the dock that may choose not to use Harbour Authority Licenced Rope Men must advise the ABP Marine Operations Manager in writing of how the proposed mooring will have been appropriately risk assessed and be undertaken under a Safe System of Work that considers the risk assessment.

Safe Systems of Work and assessments for mooring operations for vessels under 500GT not employing the services of licenced rope men must be formulated on the basis that crew will not be jumping/ stepping from a vessel to the quay or will not be landed in the ISPS area of the lock and have to transit operational areas. Therefore the safe system must be based on the ability to place initial moorings safely from the vessel to the shore then keep the vessel safely alongside while a safe means of access is rigged ( gangway) so that crew can safely access the quay to complete mooring operations.

In dock shifting of vessels along the same quay without the services of Authority Licenced Rope men is acceptable for vessels, that will at all times, have sufficient moorings so as to be in a safe and controlled situation. Any vessel that will not be in the above condition during the move will be required to use the services of Harbour Authority Rope men.

Sailing from a berth to the lock will only be permitted without the services of Harbour Authority Licenced Rope men in circumstances that the operation has been assessed and undertaken under a SSOW (advised in advance to the ABP Marine Operations Manager) that allows safe access to the vessel for the vessels own crew undertaking unmooring and final moorings can be safely removed from on-board the vessel.

## Responsibilities

Associated British Ports (ABP) is the Statutory & Competent Harbour Authority for the Ports of Cardiff and Barry.

Associated British Ports are the owner of the Ports of Cardiff & Barry.

Associated British Ports are the operator of the common user berths within the Ports of Cardiff & Barry.

Several Third Parties operate from leased areas within the Ports of Cardiff & Barry

Cardiff Licenced Boatmen (CLB) and Barry Licenced Boatmen (BLB) are private companies that provide mooring services to third parties within the area that they are licensed by the Statutory Harbour Authority. (ABP) they also provide Ad-hoc rope man services in the Barry and Cardiff Locks.

Vessels calling at the Ports of Cardiff & Barry are owned and chartered by a number of different parties.

As private companies CLB and BLB are responsible for the following;

- Recruitment of their own staff and ensuring sufficient numbers are available to meet the requirement of ABP and third Party customers.
- Training of their staff.
- Medical fitness of their own staff
- PPE and procedures for personal health and safety of their own employees
- Development and review of safe working practices in consultation with ABP as Statutory Authority and the third parties to whom they provide services.

Third Party operators of leased terminals have responsibility for the following;

- Developing and maintenance of procedures for the protection and Health & Safety for all persons entering their areas of operation.
- A responsibility to maintain any berth mooring equipment and the berth lighting equipment to a safe and serviceable standard and a responsibility to ensure that the working areas are kept as clear as practicable for the purposes of mooring and unmooring operations.
- A responsibility to vessel owners and charterers for certain elements of providing a "safe" berth and safe access.

## Vessels (Ships Masters) have responsibility for the following;

- The ship is held firmly against the fenders at all times by means of adequate mooring lines. It is unnecessary and dangerous to slack away lines, even if they appear to be taut, if the ship is not hard against the fenders.
- There is no appreciable rise and fall or current inside the impounded docks but vessels Masters are to ensure that moorings are tended as drafts change due to loading operations.
- All mooring equipment is in good operational condition, i.e. winches, bitts and fairleads. Provision of full power on deck to all mooring winches throughout period vessels are alongside.
- Mooring lines must be in good condition and if not directly led from a designated winch must be correctly turned up on mooring bitts, figure of eight style and not left on drum ends of winches. Mooring ropes in poor condition will be refused.
- The required number of moorings refers to the number of ends of moorings. A mooring 'on the bight' only counts as one end. In practice, rope bights will not be accepted as suitable moorings
- Tension winches must not be used. Mooring winches must be left out of gear with brakes correctly applied.
- If an anchor is used for berthing, it must be have up upon completion of mooring.
- Mooring lines on bollards or mooring hooks where the rope has the ability to release it under extreme angles of elevation are not allowed. In addition any angle exceeding the critical angle of 30° from a horizontal plane drawn between the mooring bollard and the ships fairlead is considered to compromise the safe working capacity of the restraint system.
- Winch brake holding capacities are as required, normally at a minimum of 60% of the mooring lines breaking load. It should be born in mind that the following items have a direct effect on the brake holding capacity of a winch.
  - Amount of torque applied to brake.
  - Number of layers of wires/ropes on the drum; split drums are generally rated for a single layer of wire/rope.
  - Direction of wire turns on the drum; pull of wire/rope and pull of band brakes should operate in same direction.
  - Condition of winch.
- Annually dated inspections with SWL / rope MBL and wire direction pointers marked on the winches indicate that good mooring practices may exist onboard.

## **ABP have a statutory responsibility:**

To ensure that all marine operations within its area of jurisdiction are risk assessed and that procedures are in place so as to ensure that all identified risks are either eliminated or maintained as low as reasonably practical (ALARP) This responsibility extends to marine procedures that are undertaken by and / or for third parties.

It therefore follows that procedures for mooring and berthing in the Ports of Cardiff & Barry should be risk assessed, developed, agreed and maintained via consultation between and CLB/ BLB and ABP as operator ( and third party operators where appropriate) with the appropriate input and overview of ABP as SHA. Those agreed procedures should duly consider company policies and control of contractor procedures for both Third Party operators and ABP.

Whilst undertaking mooring operation on behalf of a vessel, the mooring staff effectively become 'servants of the vessel', so the vessel is also partially responsible for their safety. All concerned parties therefore have responsibilities for the safety of staff / contractors undertaking mooring operations and have a duty to take appropriate action if they witness unsafe practices being undertaken by any party associated with the mooring / unmooring operations.

- All mooring contractors must have met the requirements established by ABP for the issue of a licence to perform mooring and berthing duties within the Ports of Cardiff & Barry and continue to maintain any requirements between annual checks.
- All mooring staff, third party terminal staff and ABP Marine operations staff should familiarise themselves with all safe systems of work, agreed procedures and the position of all lifebuoys and safety ladders.

### **Access / Egress to Berths**

It is best endeavour that mooring gangs are afforded access to berths, however in the case of third party operations that may be obliged to comply with any third party access and egress procedures in place. It is accepted that for certain circumstances, rope men may be considered as emergency responders and should be afforded access / egress in a timely manner.

### **Exceptional circumstances**

Mooring teams are to dynamically assess the working area and advise the lock controller of any specific potential dangers identified that may require a revised method of working. Clearly identified damage to mooring equipment should be notified immediately.

It needs to be considered that at times certain equipment may become unserviceable and or not accessible on an emergent basis or that a berthing / un-berthing operation may not be practicable under established procedures. Under such circumstances, all concerned parties should be involved in an assessment of the situation that takes into consideration the prevailing circumstances and conditions and the potential consequences of not undertaking a mooring or unmooring operation so as to determine if a departure from the documented procedures is considered appropriate and if so, what (if any) extra measures should be put in place so as to complete the operation within accepted safety parameters.

## Equipment for Mooring Contractors

**PPE** must be worn

High visibility clothing

Safety shoes/boots

Safety Helmet

Safety Goggles or Glasses

Lifejacket (Normally 150Kn buoyancy) fitted with water activated lights.

Gloves

2 VHF radios working capable of receiving and transmitting on VHF Port working channels.

## Machinery and equipment moves

Vessels must be able to berth safely without making contact with quayside cranes or any other equipment.

Gantry cranes (and other if used) should be moved to a safe position so that it is least likely to be struck by a vessel prior to the vessels arrival, sailing or shifting.

Pilots and PEC holders will assess flare of bows / sterns and over-side projections when considering approach angles and navigating the berth.

All efforts should be made to position cranes and quayside equipment so that mooring operations can take place safely.

During Sailing and berthing practices, ship unloaders / cranes and motorised plant will be formally in a state whereby no movements will take place whilst mooring operations are ongoing.

In the situation that Stevedores are waiting to discharge the person in charge of the mooring gang must make contact with the shift supervisor and ensure that the above has been established. Certain third party operations have procedures in place to ensure the above, CLB and BLB staff must ensure that they are familiar and comply with any such procedures.

## Mooring Requirements and Guidelines

### Principles

Mooring of vessels is undertaken on the principle of tying a vessel up so as to maintain the vessel's position longitudinally utilising springs lines, head and stern lines and utilisation of breast lines on some berths to help keep the vessel tight alongside.

### Mooring Line Assumptions

- It is assumed that vessels visiting the enclosed docks of Cardiff & Barry will follow the recommendations for mooring equipment and deployment as laid out in the OCIMF publications "Mooring Equipment Guidelines" 1992 and "Effective Moorings" 1989.
- It is assumed that vessels visiting the enclosed docks of Cardiff & Barry will employ ropes for all mooring positions.

Mooring lines on bollards or mooring hooks where the rope has the ability to release it under extreme angles of elevation are not allowed.

### Mooring Position

Every vessel stemmed to berth at in the enclosed docks of Cardiff & Barry does so in accordance with an initial position that is designated by the ABP operations Department or a third party terminal representative based on the operational requirement for optimum discharge operations. This initial berthing position will be confirmed by the ABP Marine operations department and communicated to CLB/ BLB and the vessels Master by way of information put on board in the locks.

Depending on the cargo operational plan and the size of the vessel, there may be a requirement to halt discharge operations, move the vessels ahead or astern an agreed distance. (Tug assistance may be required in certain weather conditions). For such occasions the new position will be agreed between the Berth Operator and ABP Marine operations department. CLB/ BLB may be employed. No move is to take place until discharge / loading operations have ceased and the ABP/ third party terminal representative, ABP Marine operations department, CLB/ BLB and vessels Master have agreed the procedure and are in all respects ready to commence.

Apart for on some third party berths where mooring positions are dependent on unloader positions (Vopak, Valero, and Cardiff No 1 Oil) mooring positions will be advised by bollard number and side to the quay.

### Example Bollards 23-27 PST

Mooring teams are to be supplied with Green Power Flares (to mark the Stern Position) and Red Power Flares (to mark the forward spring position). There will also be cones supplied, and adapters that will enable them to fit to standard cones also.

A vessel shift that has to take place during the off tide period will be overseen by operations staff during normal working hours and outside normal working hours by one of the third party rope men under an agreement to provide Berthing Master services under this circumstance.

Once the vessel is in her new position the operations staff or rope man acting as berthing Master will inform Cardiff LPS of the new position of the vessel.

Cardiff LPS staff will send this information by email to the ABP operations department

### Pre-user Checks

A visual pre-use check of the designated mooring equipment (e.g. bollards / mooring rings) to be utilised for any given mooring operation (lock or berth) must be undertaken and the findings communicated to the Lock Controller. The third party Ropeman must advise the Lock Controller via VHF that the mooring equipment is in 'apparent' good order.

Bollards that are already confirmed as non-operational will be recorded on a register and will be physically marked as out of use. These will not be required to be reported by Ropeman however, if a defective bollard or area of quay is identified this must be reported to the lock controller via VHF.

Lock Controllers / LPS to record all findings via Log Book and Notice to Masters Acknowledgement Receipt. Areas of quay or mooring equipment highlighted during the visual inspection as not in 'apparent' good order are not to be used and must be reported following internal procedures.

***Please refer to the Group ABP-HS-PR-032 Safe Management of Mooring Equipment - The master document can be found on the ABP Marine and Compliance Site.***

### Indicative Mooring Plans

